

CHILD WELFARE MENTAL HEALTH SCREENING INITIATIVE

EVALUATION PROGRESS REPORT*

October 2006



Prepared by:

**Anthony H. Lawson, M.A.
Steven D. Quantz, B.A.
and Eric R. Wright, Ph.D.**

Center for Urban Policy and the Environment
School of Public and Environmental Affairs
Indiana University-Purdue University Indianapolis (IUPUI)
342 North Senate Avenue, Indianapolis, IN 46204-1708

* This evaluation is supported financially by a contract with the Indiana Family and Social Services Administration (Contract No. 59-06-HO-0203)

OVERVIEW

The child welfare mental health screening initiative, sponsored by the Indiana Family and Social Services Administration, was developed to identify children with mental health needs who are referred to the child welfare system. The goal of this program is to provide better care to children in need of mental health services and reduce the number of failed placements. Multiple State agencies have been involved in planning and implementing this initiative. During the past year, the agencies have focused on implementing the program, including training county-level field staff on the screening tool, developing formal plans to make referrals for mental health consultations, and actually beginning the screening process. On January 1, 2005, all county agencies began screening all children referred to the State.

As part of the project, Dr. Eric R. Wright, Director of Health Policy at the Center for Urban Policy and the Environment and Associate Professor, School of Public and Environmental Affairs, IUPUI and his research staff were asked to initiate an independent evaluation of both the planning and implementation of this initiative. This report is the seventh official evaluation report required under the continuation contract. This report provides an analysis of data for children in placement during the year preceding initiative implementation (benchmark), the six month pilot period, and the current full year of implementation.

I. EVALUATION DESIGN AND METHODS

Memorandum of Understanding. This evaluation analyzes data collected by three state agencies: the Division of Mental Health and Addiction (DMHA), the Department of Child Services (DCS) and the Office of Medicaid Policy and Planning (OMPP). In compliance with the Memorandum of Understanding (MOU), signed into effect on November 22, 2004, each agency provided the evaluation team with an unidentifiable dataset, including only children who were in placement during the reporting period. The data includes an Enterprise Client Identifier (ECI), assigned by Data Transformation Services (DTS), whose sole purpose is to match the individual datasets into a single data file. Each agency provided the evaluation team with pre-screening implementation benchmark data for the reporting period of July 1, 2003 through June 30, 2004. These data were used to setup statistical models, as well as provide a comparison group to post-screening implementation data.

Data. All data received from the aforementioned state agencies is analyzed and managed using SPSS and Microsoft SQL Server. The analysis of benchmark data focuses on constructing measures comparable to post-screening implementation data in order to demonstrate the effectiveness and inclusiveness of the screening initiative. Each variable was checked for outliers and missing values and transformed appropriately. Post-implementation pilot data was evaluated in the same manner and compared to benchmark data. To ensure confidentiality, the data provided did not include any identifying information. All three datasets were merged together using the Enterprise Client Identifier (ECI). This number, assigned by DTS, allows the evaluation team to recognize the same individual across the three separate data systems without providing identifying characteristics.

DCS Data. The data provided by the Department of Child Services (DCS) includes all children who were in substitute care during the benchmark period, the year prior to pilot implementation of July 1, 2003 to June 30, 2004 and the six months of the pilot implementation period of July 1, 2004 through December 31, 2004. DCS also provided data for the period of January 1, 2005 through March 31, 2005 (first quarter of full implementation), April 1, 2005 through June 31, 2005 (second quarter of full implementation), July 1, 2005 through September 30, 2005 (third quarter of full implementation), and October 1, 2005 through December 31, 2005 (fourth quarter of full implementation). Only children who were removed or declared a Child in Need of Services (CHINS) during the reporting periods were selected in order to provide a longitudinal comparison of future data.

During the course of this project, it was discovered that the evaluation team was not receiving data for all children within the DCS system. Specifically, as a result of the de-identification process, only children assigned an enterprise client identifier (ECI) were included in the dataset provided; however, not all children were assigned such a number. Assigning a child an ECI number requires that he/she is in another data system, such as the TANF database, in addition to the DCS system. This substantially reduced the number of children in the data file used to conduct the analyses. The data error has been corrected in this report.

DCS data includes information regarding demographics, current and previous CHINS and removal dates, the total number of removals, and the number of placements within the current case. Additional variables were computed based upon the data provided. These include a multiple CHINS and removal indicator. If a child had an initial CHINS date that occurred before the current CHINS date, the multiple CHINS indicator was coded as a 1 indicating multiple CHINS have occurred. If the initial and current CHINS dates are the same, the variable was coded as a 0, indicating that this is the first occurrence. The multiple removal indicator was coded in the same manner, but based upon the number of previous removals recorded in the data. If a child has 1 or more previous removals, the removal indicator was coded as a 1; a code of 0 was used otherwise. Race was also recoded into a dichotomous measure for statistical purposes. This variable was coded as white (0) and nonwhite (1). In addition, the variable indicating screening results of children who were screening during the pilot period was recoded to collapse like categories. The resulting variable is coded as 1 'Urgent Referral', 2 'Refer for follow-up, 3 'Re-screen' and 4 'No Identified risk.' The results were further collapsed into a dichotomous variable indicating whether or not a risk was identified in the screening.

DMHA Data. The Division of Mental Health and Addiction (DMHA) also provided data for those children who had received services through their agency during the benchmark, pilot, and full implementation periods. A variable indicating whether the child had received DMHA services was computed and coded as a 1 if DMHA data existed on the child. A variable indicating if the DMHA enrollment date is before or after the initial CHINS date was also computed.

OMPP Data. The Office of Medicaid Policy and Planning (OMPP) also provided data on children with regard to behavioral health services that a child had received during the benchmark, pilot, and full implementation periods. The nature of this data required significant transformations to be performed before being analyzed. The data were aggregated to create a

single record for each child per reporting period. The first service date variable was aggregated to select the earliest date within all records pertaining to each child. The last service date was aggregated to select the latest date for each child. The amount paid was aggregated as a sum of all behavioral health records for each child. Finally, the category of service and procedure codes were aggregated to count each episode of mental health or addiction care provided.

II. DATA ANALYSIS

Client Flow—Benchmark Period.

Using data from DCS, client flow was analyzed with regard to changes in placement during the benchmark period (N=2782). A descriptive analysis of recidivism shows that 17.5 % of children removed or declared a CHINS during the benchmark period had one or more previous contacts. The results also show that 16.2% of children declared a CHINS or removed during the benchmark period had one or more previous removals. Table 1 provides a descriptive analysis of these characteristics.

Further analysis of client flow reveals that of the 2782 children declared a CHINS or removed, 288 (10.4%) received behavioral health services paid by OMPP or DMHA within 60 days of their last DCS contact. This number does not include children who have received services prior to their last CHINS/removal in order to isolate the potential causal relationship between the DCS contact and the receipt of services. Table 2 is provided to show this analysis for all periods.

Mental Health Services. Analysis of DMHA data reveals that 2295 (20.71%) of children declared a CHINS or removed during the three periods received services through the agency at some point during this time. In the benchmark period, 658 (23.7%) children received such services. Descriptive statistics regarding the level of function (LOF) of this group are provided in Table 3.

In addition to DMHA, Medicaid data shows that an additional 1007 (36.2%) children declared a CHINS or removed in the benchmark period received mental health or addiction treatment at some point. When data from both DMHA and OMPP are merged, the data show that 1073 (38.6%) unique children declared a CHINS during the benchmark period received mental health or addiction services, of which 210 (19.6%) received these services prior to their contact with DCS.

Recidivism and Stability. To measure recidivism and stability, five variables were used. These variables include initial CHINS date, current CHINS date, initial removal date, current removal date, and total number of removals. The presence of multiple CHINS, as defined by an initial CHINS date occurring before the current CHINS date, indicates a pattern of recidivism. The analysis shows that 488 (17.5%) children removed during the benchmark period had a previous CHINS. A logistic regression model was also utilized, using the multiple CHINS indicator as the dependent variable and age, race, gender, a variable indicating that a child received DMHA services prior to their initial CHINS, and a variable indicating that a child received behavioral health services paid by OMPP prior to their CHINS. The results of the regression show that age and whether or not a child received services paid by OMPP are significantly related with recidivism. More specifically, older children were more likely to experience recidivism. Children who have received behavioral health services paid by OMPP prior to DCS contact are less likely to experience recidivism than those who have not had behavioral health services. The complete results of this model are displayed in Table 4.

In addition to recidivism, a measure of placement stability was computed based upon the number of removals as well as the dates of the initial and current removals. If a child had more than a single removal or their initial removal date occurred prior to their current removal date, a variable indicating such was coded as 0. If a child had only a single removal, the stability measure was coded as a 1. This measure indicates that the child is experiencing placement stability. The data show that 450 (16.2%) children removed during the benchmark period had a previous removal. The same logistic regression model used to analyze recidivism was used to analyze the stability measure. The results indicate that one of the significant predictors of multiple removals is age. This is to say that older children are less likely to experience placement stability than younger children. Of greater interest, however, is that the other significant variable in the model, whether or not they receive mental health/addiction treatment paid by OMPP, indicates that children receiving such services are more likely to experience stability. The full results of the regression model are presented in Table 4.

Service Expenditures. The third series of analyses examines the expenditures for services provided to clients. Using expenditure data provided by OMPP, the evaluation team examined the costs associated with mental health and addiction treatment during the benchmark period. The data show that of the 2782 children removed or declared a CHINS during the benchmark period, 678 (24.4%) children received mental health or addiction services paid by Medicaid dollars in the benchmark period. The total dollar amount spent for these services, for children enrolled with DCS, was \$2,699,311, averaging to \$3,988 per child receiving services. As a comparison, the total dollars spent on behavioral health services for all children during the benchmark period was \$4,794,040 for 1387 children, an average of \$3,435 per child.

Client Flow—Pilot Implementation Period.

Using data from DCS, client flow was also analyzed with regard to the pilot implementation (N=2224) period. Our analysis shows that there is a significant difference between the demographics of both the benchmark and pilot periods in age and race categories. More specifically, the percentage of non-whites decreased during this period and the difference in age is attributable to an increase in the number of children removed under one year of age. Furthermore, a descriptive analysis of recidivism shows that during the pilot implementation period 16.9% of children had a previous CHINS. The results also show that 399 (17.9%) children removed or declared a CHINS during the pilot period had one or more previous removals. Table 1 provides a descriptive analysis of these characteristics.

Further analysis of client flow reveals that of the 2224 children declared a CHINS or removed, 802 (36.1%) were screened for mental health or addiction needs during the pilot period. Furthermore, of these 802 screened children, 324 (40.4%) had an identified risk. A total of 162 (7.3%) children received behavioral health services paid by OMPP or DMHA within 60 days of their last DCS contact during the pilot period. Of those children who received services, 24 (14.8%) were screened and identified as having a risk. These numbers do not include children who have received services prior to their last CHINS/removal in order to isolate the potential causal relationship between the DCS contact and the receipt of services. Table 2 is provided to show this analysis for all periods.

Mental Health Services. Analysis of DMHA data for the pilot implementation reveals that 416 (18.7%) children received such services during the pilot period, a significantly smaller proportion than benchmark period ($t=4.243$; $p \leq .000$). Descriptive statistics regarding the level of function of this group is provided in Table 3.

Medicaid data shows that during the pilot period 367 (16.5%) children received behavioral health services paid by OMPP, a significantly smaller proportion from the benchmark period ($t=15.900$; $p \leq .000$). Between both DMHA and OMPP, a total of 600 (27.0%) children received behavioral health services from either agency during the pilot period, with 113 (18.8%) receiving services prior to their contact with DCS.

Screening. Beginning on July 1, 2004, DCS began a pilot implementation of the screening initiative. This pilot implementation included a small subset of counties within the state. During the pilot periods, a total of 2224 children were declared a CHINS or removed. Of these children, 802 (36.1%) were screened for mental health or addiction needs. Based solely on available data, the proportion of children screened within a pilot county cannot be determined. The results of the screening show that within the screening subgroup, 324 (40.4%) had no identified risk, 154 (19.2%) required re-screening and 324 (40.4%) had an identified risk. Of those with an identified risk, 266 (82.1%) were identified as needing an urgent referral. Further analysis reveals that 162 (7.3%) children, having an identified risk, received treatment within 60 days of referral as a result of the screening.

Recidivism and Permanency. To measure recidivism and permanency for the pilot period, the same variables were used as in the benchmark period. These variables include initial CHINS date, current CHINS date, initial removal date, current removal date, and total number of removals. The presence of multiple CHINS, as defined by an initial CHINS date occurring before the current CHINS date, indicates a pattern of recidivism. The analysis shows that 399 (17.9%) children removed or declared a CHINS during the pilot period had a previous CHINS. A logistic regression model was also utilized, using the multiple CHINS indicator as the dependent variable and age, race, gender, a variable indicating that a child received DMHA services prior to their initial CHINS, and a dichotomous version of screening results as independent variables, to determine the probability of having multiple CHINS. The results of the regression show that age and receiving DMHA services are significant variables associated with recidivism during the pilot period. More specifically, older children are more likely to experience recidivism than younger children, and those who had received DMHA services prior to their first CHINS or removal are less likely to experience recidivism. Of greater interest, the results indicate that if the screening reveals an identified risk, a child is less likely to experience recidivism.

In addition to recidivism, a measure of permanency was computed based upon the number of removals. If a child had more than a single removal, a variable indicating such was coded as 0. This measure indicates that the child is experiencing placement stability. The data show that 348 (15.6%) children who were removed or declared a CHINS during the pilot period had a previous removal. The same logistic regression model used to analyze recidivism was used to analyze the stability measure. The results indicate that one of the significant predictors of multiple removals,

during the pilot period is age. This is to say that older children are more likely to have multiple removals than younger children. In addition to age, the model also shows that if a child received services paid by OMPP or DMHA, they are more likely to experience stability. Furthermore, the results indicate that if the screening reveals an identified risk, a child is more likely to have stability in placement. This finding suggests that those with multiple removals are likely to have a need for such treatment. The full results of the regression model are presented in Table 4.

Service Expenditures. Medicaid data for the pilot periods allowed the evaluation team to examine the costs associated with behavioral health treatment. The data show that of the 2224 children removed or declared a CHINS during the pilot period, 468 (21.0%) children received mental health or addiction services paid by Medicaid dollars totaling \$1,614,299. The average dollar amount spent for these services per child was \$3,449 in the pilot period. As a comparison, the total dollars spent on behavioral health services for all children during the pilot period was \$7,113,020 for 1750 children, an average of \$4,065 per child.

Client Flow—Full Implementation Period.

Using data from DCS, client flow was also analyzed with regard to the full implementation period (N=6096). The larger number of DCS clients in our data, as compared to the benchmark period, is likely the result of greater precision in assigning ECI numbers. Our analysis shows that there is a significant difference between the ages and race of children having contact with DCS in the first full implementation period. The difference in age is attributable to an increase in the number of children removed under one year of age from the benchmark period. Additionally, the percentage of non-whites increased during this period. Furthermore, a descriptive analysis of recidivism shows that of the children declared a CHINS or removed during the full implementation period, 17.2% had previous contact with the child welfare system. The results also show that 16.4% of children removed or declared a CHINS during the full implementation period had one or more previous removals. Table 1 provides a descriptive analysis of these characteristics.

Further analysis of client flow reveals that of the 6096 children declared a CHINS or removed in the full implementation period, 4129 (67.7%) were screened for mental health or addiction needs. Furthermore, of these 4129 screened children, 1476 (35.7%) had an identified risk. A total of 786 (12.9%) children received behavioral health services paid by OMPP or DMHA within 60 days of their last DCS contact. Of those children who received services, 343 (43.6%) were screened and were identified as having a risk. These numbers do not include children who have received services prior to their last CHINS/removal in order to isolate the potential causal relationship between the DCS contact and the receipt of services. Table 2 is provided to show this analysis for all periods.

Mental Health Services. Analysis of DMHA data for the full implementation period reveals that 1221 (20.0%) children received such services during this reporting period, a significantly greater proportion than benchmark period ($t=61.495$; $p \leq .000$). Descriptive statistics regarding the level of function of this group is provided in Table 3.

Medicaid data shows that during the full implementation period, 2004 (32.9%) children received behavioral health services paid by OMPP, a significantly greater proportion from the benchmark period ($t=153.440$; $p \leq .000$). Between both DMHA and OMPP, a total of 2167 (35.5%) children received behavioral health services from either agency during the full implementation period, with 722 (33.3%) receiving services prior to their contact with DCS.

Screening. During the first nine months of the full implementation period, a total of 6096 children were declared a CHINS or removed. Of these children, 4129 (67.7%) were screened for mental health or addiction needs. The results of the screening show that within the screening subgroup 1697 (41.1%) had no identified risk, 956 (23.2%) required re-screening and 1476 (35.7%) had an identified risk. Of those with an identified risk, 1197 (81.0%) were identified as needing an urgent referral. Further analysis reveals that 343 (23.2%) children, having an identified risk, received treatment within 60 days of referral as a result of the screening.

Recidivism and Permanency. To measure recidivism and stability for the full implementation period, the same variables were used as in the benchmark and pilot periods. These variables include initial CHINS date, current CHINS date, initial removal date, current removal date, and total number of removals. The presence of multiple CHINS, as defined by an initial CHINS date occurring before the current CHINS date, indicates a pattern of recidivism. The analysis shows that 1046 (17.2%) children removed or declared a CHINS during the full implementation period had a previous CHINS. A logistic regression model was also utilized, using the multiple CHINS indicator as the dependent variable and age, race, gender, a variable indicating that a child received DMHA or OMPP services prior to their initial CHINS, and a dichotomous version of screening results as independent variables, to determine the probability of having multiple CHINS. The results of the regression show that age and receiving services paid by OMPP are significant variables associated with recidivism during the full implementation period. More specifically, older children are more likely to experience recidivism than younger children, and those who had received services paid for by OMPP prior to their first CHINS or removal are less likely to experience recidivism. Also of interest, the results indicate that if the screening reveals an identified risk, a child is more likely to experience recidivism, suggesting that children who have behavioral health needs that have not been met, are more likely to experience multiple contacts with DCS.

In addition to recidivism, a measure of stability was computed based upon the number of removals. If a child had more than a single removal, a variable indicating such was coded as 0. This measure indicates that the child is experiencing placement stability. The data show that 1000 (16.4%) children who were removed or declared a CHINS during the full implementation period had a previous removal. The same logistic regression model used to analyze recidivism was used to analyze the stability measure. The results indicate several significant predictors of multiple removals during the full implementation period, including age, gender, and whether received services are paid by OMPP. Specifically, older children and males are more likely to have multiple removals than younger children or females. Furthermore, if a child received services paid by OMPP, the children are more likely to experience stability. Also of interest, the results indicate that if the screening reveals an identified risk, a child is more likely to experience placement stability, suggesting that those with multiple removals are likely to have a need for such treatment. The full results of the regression model are presented in Table 4.

Service Expenditures. Medicaid data for the full implementation period allowed the evaluation team to examine the costs associated with behavioral health treatment. The data show that of the 6096 children removed or declared a CHINS during the full implementation period, 1778 (29.2%) children received mental health or addiction services paid by Medicaid dollars totaling \$5,826,500. The average dollar amount spent for these services per child was \$3277 in this period. When compared to the dollars spent on behavioral health services per child during the benchmark (\$3,988) and pilot (\$3,449) periods, the average cost per child has decreased during the full implementation period. As a comparison, the total dollars spent on behavioral health services for all children during the full implementation period was \$15,269,360 for 3312 children, an average of \$4,610 per child.

III. DISCUSSION

This analysis provides a descriptive profile of children having contact with the child welfare system. The analyses also demonstrate that a relationship exists between mental health and/or addiction needs and the number of removals that a child has. As a result, it is anticipated that as this initiative progresses, a significantly greater proportion of children having contact with the child welfare system will receive mental health and addiction treatment as a result of the screening. At this point in the screening initiative, however, it cannot be determined if contact with the child welfare system is a result of untreated mental health/addiction needs or if these needs are a result of the contact. Further evaluation of this project is necessary in order to clarify this relationship and determine causality. While the results of this analysis are not conclusive, they do provide a basis for comparison with regard to future longitudinal study.

Table 1: Descriptive Statistics of DCS Data

	BENCHMARK		PILOT		FULL IMPLEMENTATION		TOTAL	
	N	%	N	%	N	%	N	%
<u>DEMOGRAPHICS</u>								
Age (F=34.471, p ≤ .000)								
Less Than One Year	38	1.4%	297	13.4%	960	15.7%	1295	11.7%
1 To 4 Years Old	971	34.9%	674	30.3%	1701	27.9%	3346	30.1%
5 To 8 Years Old	581	20.9%	408	18.3%	1185	19.4%	2174	19.6%
9 To 13 Years Old	626	22.5%	425	19.1%	1226	20.1%	2277	20.5%
14 To 17 Years Old	566	20.3%	420	18.9%	1024	16.8%	2010	18.1%
Total	2782	100.0%	2224	100.0%	6096	100.0%	11102	100.0%
Gender (F=1.123, p ≤ .325)								
Male	1413	50.8%	1135	51.0%	3007	49.3%	5555	50.0%
Female	1369	49.2%	1089	49.0%	3089	50.7%	5547	50.0%
Total	2782	100.0%	2224	100.0%	6096	100.0%	11102	100.0%
Race (F=3.663, p ≤ .026)								
White	1847	66.4%	1555	69.9%	4158	68.2%	7560	67.9%
Non White	935	33.6%	699	30.1%	1938	31.8%	3572	32.1%
Total	2782	100.0%	2224	100.0%	6096	100.0%	11102	100.0%
<u>CLIENT FLOW</u>								
Previous CHINS (F=0.292, p ≤ .746)								
Yes	488	17.5%	399	17.9%	1046	17.2%	1933	17.4%
No	2294	82.5%	1825	82.1%	5050	82.8%	9169	82.6%
Total	2782	100.0%	2224	100.0%	6096	100.0%	11102	100.0%
Previous Removal (F=0.872, p ≤ .418)								
Yes	450	16.2%	348	15.6%	1000	16.4%	1798	16.2%
No	2332	83.8%	1876	84.4%	5096	83.6%	9304	83.8%
Total	2782	100.0%	2224	100.0%	6096	100.0%	11102	100.0%

Table 2: Client Flow Analysis

	Total Number of CHINS/Removals	Number (%) of Children Screened for Mental Health/Addiction Needs ¹	Number (%) of Children with an Identified Risk ²	Number (%) of Children receiving Mental Health/Addiction treatment ³	Number (%) of Children receiving assessment ⁴
Benchmark Period (July 1, 2003-June 30, 2004)	2782	N/A	N/A	288 (10.4%)	276 (9.9%)
Pilot Period (July 1, 2004-December 31, 2004)	2224	802 (36.1%)	324 (40.4%)	162 (7.3%)	132 (5.9%)
Full Implementation Period (January 1, 2005-December 31, 2005)	6096	4129 (67.7%)	1476 (35.7%)	786 (12.9%)	624 (10.2%)

¹ Percentage calculated as a function of the total number of CHINS/Removals occurring during each research period.

² As a percentage of the total number of children screened.

³ Only children who received services of OMPP or DMHA within 60 days of their last CHINS/removal and did not receive services prior to their first CHINS were included. The percentage is calculated as a function of the total number of CHINS/removals within each research period.

⁴ Only children who received an assessment paid for by OMPP within 60 days of their last CHINS/removal.

Table 3: Descriptive Statistics of DMHA Data

		Benchmark	Pilot	Full	Overall
		N=658	N=416	N=1221	N=2295
A. Affective Symptoms					
(F=8.227 p ≤ .000)	Mean	15.7	15.5	15.0	15.3
	(S.D)	(4.2)	(4.3)	(4.4)	(4.3)
B. Suicidal Ideation/Behaviors					
(F=1.663 p ≤ .190)	Mean	6.7	6.7	6.7	6.7
	(S.D)	(0.9)	(0.9)	(1.0)	(1.0)
C. Abuse					
(F=22.792 p ≤ .000)	Mean	6.8	6.7	6.4	6.6
	(S.D)	(0.8)	(1.0)	(1.4)	(1.2)
D. Neglect					
(F=28.557 p ≤ .000)	Mean	6.7	6.6	6.2	6.4
	(S.D)	(1.1)	(1.1)	(1.7)	(1.5)
E. Health/Physical Status					
(F=3.795 p ≤ .023)	Mean	6.6	6.8	6.6	6.7
	(S.D)	(1.0)	(0.8)	(1.0)	(1.0)
F. Thinking					
(F=3.543 p ≤ .029)	Mean	10.4	10.7	10.3	10.4
	(S.D)	(3.1)	(3.1)	(3.3)	(3.2)
G. Family					
(F=9.698 p ≤ .000)	Mean	15.1	15.6	14.4	14.9
	(S.D)	(5.1)	(5.1)	(5.2)	(5.1)
H. School					
(F=3.017 p ≤ .049)	Mean	23.2	23.6	23.0	23.2
	(S.D)	(5.4)	(5.2)	(5.4)	(5.4)
I. Disruptive Behavior					
(F=10.150 p ≤ .000)	Mean	17.7	18.1	17.3	17.6
	(S.D)	(3.5)	(3.2)	(3.8)	(3.6)
J. Substance Use/Abuse					
(F=2.515 p ≤ .081)	Mean	20.7	20.6	20.5	20.5
	(S.D)	(1.3)	(1.7)	(1.8)	(1.7)

*LOF score ranges vary based upon differing scales. Ranges are presented below. For additional questions contact the Division of Mental Health and Addiction.

A: 3-21; B: 1-7; C: 1-7; D: 1-7; E: 1-7; F: 2-14; G: 3-21; H: 4-28; I: 3-21; J: 3-21

Table 4: Logistic Regression Analysis

	Recidivism			Placement Stability		
	Benchmark	Pilot	Full	Benchmark	Pilot	Full
	B (S.E.E.)	B (S.E.E.)	B (S.E.E.)	B (S.E.E.)	B (S.E.E.)	B (S.E.E.)
Constant	-1.840*** (.111)	-1.838*** (.113)	-2.009*** (.072)	2.295*** (.150)	2.401*** (.129)	2.224*** (.077)
Age	0.057*** (.009)	0.067*** (.010)	0.069*** (.006)	-0.093*** (.010)	-0.111*** (.011)	-0.107*** (.007)
Nonwhite	-0.147 (.108)	-0.152 (.124)	-0.112 (.075)	0.104 (.112)	-0.100 (.129)	-0.086 (.075)
Female	-0.162 (.101)	-0.083 (.112)	-0.116 (.069)	0.028 (.106)	0.060 (.121)	0.161* (.071)
DMHA Services Provided	0.264 (.526)	-0.550* (.499)	-0.309 (.222)	0.938 (1.058)	2.105* (1.026)	0.428 (.293)
Received Services Paid by OMPP	-0.813*** (.243)	-0.575 (.339)	-0.375** (.127)	2.015*** (.395)	1.493** (.523)	1.190*** (.166)
Risk Identified in Screening	N/A	-0.522** (.174)	0.268*** (.078)	N/A	0.813*** (.196)	0.222** (.086)
χ^2	47.301***	51.930***	152.687***	128.600***	131.667***	333.353***
Nagelkerke R ²	.028	.038	.041	.077	.099	.090

***p ≤ .001 **p ≤ .01 *p ≤ .05